

REMARKS

Amendments to the claims have been made to respond to the issues and concerns raised in the Office Action, to clarify aspects in the specification and claims, and to refine claim language. The amendments are believed to be consistent with the disclosure originally filed. The amendments also have been particularly presented to avoid, where applicable, any admission or estoppel, generally, negatively affecting the scope of protection provided by the disclosure and claims of the present application, and also in a manner that avoids prosecution history estoppel, limitation of the scope of equivalences, or the like. It is believed the amendments fully respond to the issues raised in the Office Action. Further detail with respect to specific points raised in the Office Action is offered below.

The Applicant notes that much of the current Office Action appears to mirror the discussion raised in prior Office Actions in the current case. Moreover, a specific response to the submissions made by the Applicant in its Request for Continued Examination dated December 15, 2004, appear to have been addressed in the current Office Action in the text marked as "Response to Arguments". Accordingly, it is believed that addressing the discussion contained in the "Response to Arguments" will fully respond to the issues raised in the current Office Action.

With respect to the new matter concerns raised in prior Office Actions, the Office has raised further concerns regarding the Applicant's submissions addressing this point in its Request for Continued Examination dated December 15, 2004. The Applicant disagrees with these further concerns raised. In particular, the Applicant contends that attendant to the ordinary skill in the art would be a recognition from review of the specification that the claimed methods constitute a coherent embodiment of the invention, and that the specification need not individually itemize each element of such an embodiment at one location. The specification at page 54, lines 4-5 expressly states that various combinations and permutations of the elements disclosed in the specification should be understood to support claims for the same, and the specification at page 52, line 30 expressly states that various combinations and permutations of such elements may be created and presented, for example, perhaps to optimize design and

performance. Moreover, while not necessary to support the present claims, the Applicant notes that the specification in fact explicitly sets forth the particular subject matter of the current claims at one location. Specifically, the specification at page 5, lines 20-24 expressly states that a broad object of the invention can be “to integrate early-weaning, induced puberty, or sexed semen into a single-calf heifer system to increase value of non-replacement heifers.” These aspects of induced puberty, sexed semen, and non-replacement heifers – referenced together in the preceding passage as one possible embodiment of the invention – are precisely the aspects covered in the current independent claim, and aspects related to early weaning are discussed in dependencies to the current independent claim.

Moreover, the Applicant disagrees that the individual teachings of the specification do not provide support for the claims as a whole. However, for clarification purposes, the independent claim has been amended to recite the step of “managing said plurality of nonhuman herd-managed female mammals for at least one reproductive factor”. Basis for this amendment can be found in the specification at page 13, lines 3-6, reading in part “the IS incorporates reproductive factors such as puberty and breeding of heifers”. Importantly, this passage makes clear that reproductive factors include but are not limited to factors such as puberty and breeding of heifers, and it may be appreciated that various individual factors called out in the Office Action – such as early puberty, synchronizing estrous, pregnancy rates, calf survival, feed costs, breeding costs, and health costs – are related to and encompassed by the terms “puberty”, “breeding of heifers”, or related reproductive factors. Please also note that these amendments have been voluntarily implemented solely to aid the Office and to expedite examination of the application. The amendments should not be deemed as presenting any estoppel or the like and the Applicant expressly reserves the right to present the full scope of the prior claims at any time.

Additionally, the Applicant disagrees that the term “biological efficiency” is not supported by the specification as originally filed. However, to aid the Office and expedite examination of the application, the Applicant has amended the claims to remove reference to biological efficiency. Again, please note that these amendments have been voluntarily implemented solely to aid the Office and to expedite examination of the application. The

amendments should not be deemed as presenting any estoppel or the like and the Applicant expressly reserves the right to present the full scope of the prior claims at any time.

With respect to the enablement concerns raised in prior Office Actions, the Office has raised further concerns regarding the Applicant's submissions addressing this point in its Request for Continued Examination dated December 15, 2004. The Applicant disagrees with these further concerns raised. In particular, the Applicant notes that much of the Office Action is focused on the Applicant's disclosure of diet as a tool for inducing early puberty. With respect to such dietary techniques as a means for inducing early puberty, the Applicant notes that the specification in fact does teach parameters of diet that may be routinely analyzed in order to reasonably identify means for inducing early puberty. For example, the specification at page 11, line 30 teaches that early puberty can be induced by generating rapid weight gain in a mammal. Accordingly, any of various techniques known in the art for achieving weight gain in a herd-managed mammal may be applicable to inducing early puberty in such herd-managed mammals. Moreover, the specification at various points, including for example at page 2, lines 20-29, provides even more focused dietary parameters with respect to bovines. Any of a number of such specifically identified dietary parameters may be applicable to other herd-managed animals, thus providing guidance and direction in which experimentation should proceed.

Additionally, the Applicant disagrees with the enablement concerns raised with respect to the disclosed simulations. At the outset, the Applicant notes that these simulations were discussed merely as part of examples in which the inventive technology was applied under field conditions, and therefore do not limit the scope of the inventive technology as generally described. However, the Applicant further contends that the simulations do not pose any enablement issues in and of themselves. In particular, the simulations merely correct for certain deficiencies present in the examples due to the nature of the field conditions encountered. As is anticipated to be established by an affidavit discussed below, such field conditions may not actually represent true field conditions, because the facilities available to researchers frequently may be sub-par as compared to typical field conditions. To the extent it is suggested that this merely supports the unpredictability of an artisan's ability to practice the invention, the Applicant disagrees. Rather, the deficiencies which were corrected for by the simulations

involved factors that may be eminently predictable, such as sire selection, inadequate calving facilities, labor difficulties caused by calving out of synchrony with herd mates, limited space due to feed lot animals occupying other pens, and contributory time management problems among employees. Because such factors may be predictable, they may lend themselves particularly well for adjustment by way of simulation.

Additionally, the Applicant disagrees with the enablement concerns raised with respect to methods of sorting sperm to purities of 90% and above. Compensating for individual sperm cell characteristics and achieving such purities may be merely a function of adjusting the parameters of a sorting device, for example perhaps a flow cytometer. With respect to flow cytometers in particular, the parameters affecting sorting purities may be well known in the art, and adjusting these parameters to reach sorting purities of 90% and above may be routinely accomplished. The Applicant takes note of the fact that the Office has not yet received an affidavit to be provided in which these and other factual matters will be established, and anticipates being able to do so in a timely manner for consideration with this Response and Request for Reconsideration, perhaps in the context of an interview with the Office.

With respect to the definiteness concerns raised in the Office Action, the Applicant believes the concerns raised with respect to the term "biological efficiency" are moot for the reasons discussed above. With respect to the term "traditionally herd-managed female mammals", the Applicant disagrees with the definiteness concern raised. However, in order to clarify the claims and expedite examination of the application, the Applicant has amended the claims to recite the term "herd-managed female mammal". It is believed this term is definite with respect to its known usage in the art and with respect to its repeated use in the specification in terms such as "herd management technologies", "herd management system", "herd management", "herd management program", "herd management technology", and "herd management cycle". Moreover, please also note that these amendments have been voluntarily implemented solely to aid the Office and to expedite examination of the application. The amendments should not be deemed as presenting any estoppel or the like and the Applicant expressly reserves the right to present the full scope of the prior claims at any time.

The Applicant, having addressed each of the concerns raised in the Office Action, respectfully requests reconsideration and withdrawal of the rejections and objections to the application. Allowance of claims 28-43 and 45-50 is requested at the Examiner's earliest convenience.

Dated this 6 day of September, 2005.

Respectfully submitted,

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